

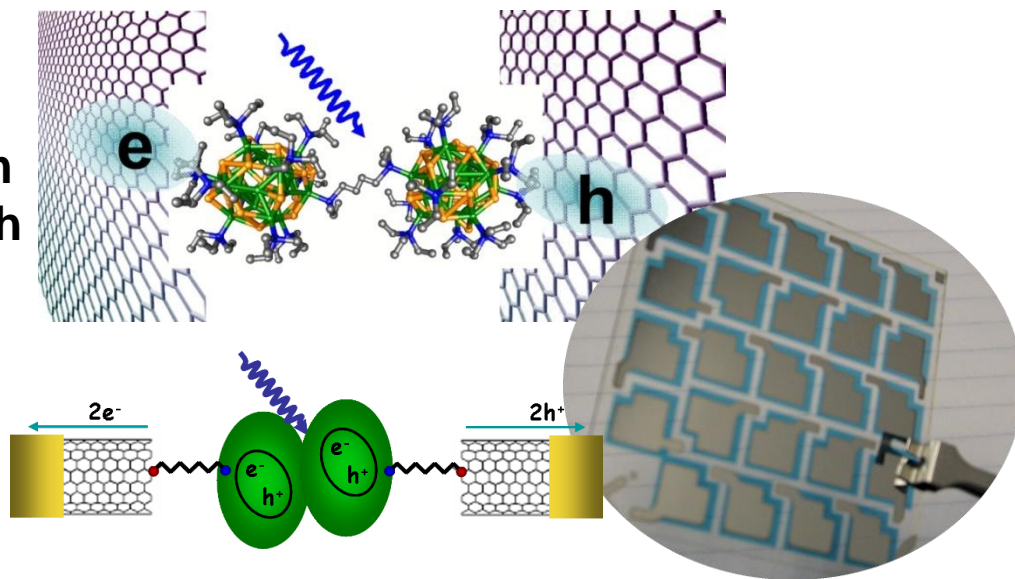


U.S. DEPARTMENT OF
ENERGY

Re-Defining Photovoltaic Efficiency Through Molecule Scale Control

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The Columbia EFRC will create enabling technology to re-define efficiency in nanostructured thin-film organic photovoltaic devices through fundamental understanding and through molecule-scale control of charge formation, separation, extraction, and transport.



RESEARCH PLAN AND DIRECTIONS

Fundamental understanding of photo-physical and kinetic properties on the nanoscale will allow us to design systems for efficient photovoltaic generation and separation of charges. By using new conducting materials such as graphene we can transport these charges to macroscopic electrical systems, providing basis for revolutionary low cost, high efficiency devices.



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